



COMMONWEALTH of VIRGINIA

DEPARTMENT OF WASTE MANAGEMENT

11th Floor, Monroe Building

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Richmond, VA 23219

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PRELIMINARY ASSESSMENT

OF

VIRGINIA SAW & KNIFE
VA-453

Submitted By:

Commonwealth of Virginia

Department of Waste Management

May 11, 1988

Prepared by:

A handwritten signature in cursive script, appearing to read "Emma Pope".

Emma Pope, Environmental Scientist
Superfund Program

Approved by:

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P. M. Ewald
Superfund Program Coordinator

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1.0 INTRODUCTION

1.1 Site Location

The Virginia Saw and Knife site is located in Chesterfield County, Virginia at the intersection of US Route 60 (Midlothian Turnpike) and State Route 678 (Providence Road) (Chesterfield, Virginia 7.5' topographic quadrangle, 1963, Figure 1). The site coordinates are 37°29'47" N. and 77°32'40" W.

1.2 Site Layout

The site consists of a 1,300 square foot building in which a receiving desk, tables and various blade sharpening equipment are located, and the dirt and gravel parking lot directly outside the front of the building (Figure 2). Adjacent to the Virginia Saw and Knife building are open sheds and across the dirt and gravel parking lot is another building occupied by Rutherford Adjustment.

1.3 Site History

The property on which Virginia Saw and Knife operates is owned by Rockwood Park Associates. The facility began operating in 1986, as S & S Saw Company and is presently a small (three man) company which sharpens saws and knives. (David Simmons, site operator, telephone conversation, 3/8/88).

Rockwood Park Associates (contact, Ms. Barbara Loewenthal) purchased the site property and surrounding property from P. D. Elliott in September 1986. The property includes the garage where Virginia Saw and Knife operates, another building located ten yards diagonally from Virginia Saw and Knife, various sheds along the northern perimeter of the property, and the adjacent parking lot.

Other businesses located on this property include: Dominion Paving and Sealing (no longer there), Capital Drywall (no longer there), Rutherford Adjustment (still there), Virginia Saw and Knife, and individuals who rent the sheds (Loewenthal, telephone conversation, 3/11/88).

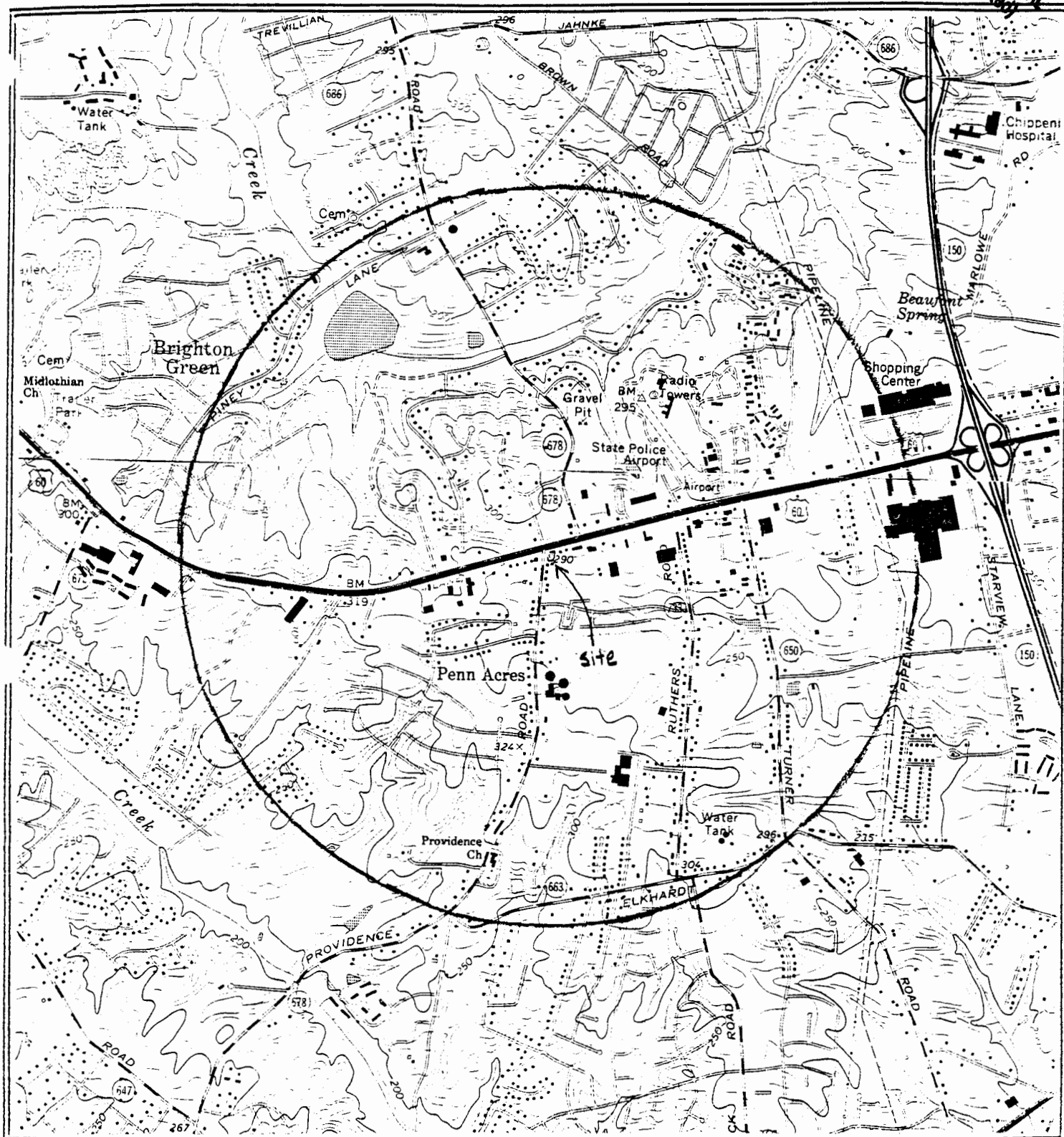
A preliminary assessment site visit was performed by the Department of Waste Management (DWM) - Superfund Program on March 9, 1988, after an anonymous complaint of illegal waste disposal.

2.0 ENVIRONMENTAL SETTING

2.1 Population

The site is located in Chesterfield County, but the area of concern (3 miles) includes a small part of the City of Richmond. According to 1980 census data, the population within a three square mile area of Chesterfield County is 977. In a three square mile area of Richmond City is an estimated 10,961 people. Based on this information, the estimated population within a

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VIRGINIA SAW AND KNIFE SITE
CHESTERFIELD, VIRGINIA 7.5' topographic quadrangle, 1963



REVISED:

REVISED:

DRAWN BY: EJP

REVISED:

DATE: 5/11/88

FIGURE NO: 1

three mile radius of the site is 1,975 people.

2.2 Land Use

To the east and west of the site lie the businesses located along Route 60 (Midlothian Turnpike). Several commercial businesses and some residences are located north of the site, while to the south land use is largely residential.

2.3 Climate and Topography

The site is at an elevation of 290 feet (MSL). The mean annual temperature, as recorded by NOAA at the Richmond weather station is 57.7°F (14.3°C). The average annual precipitation is 44.07 inches (11.9 cm).

2.4 Geology

The Virginia Saw and Knife site is located at the eastern boundary of the Piedmont Physiographic Province of Virginia in the Fall Zone. The Fall Zone is the transitional area where the crystalline rocks of the Piedmont are overlain by the eastward dipping sediments of the Coastal Plain. The Fall Zone is characterized by an abrupt fall in land elevation. This difference in elevation is manifested in the topography as well as in the change in velocities to the streams and rivers (Ellison, 1979).

The site is situated on Cenozoic gravel, characterized by abundant, well-rounded pebbles and cobbles in a sandy to clayey-sand matrix. These gravels were deposited on a nearly planar surface, with some channels, which today has a gentle eastward inclination of about nine feet per mile (Goodwin, 1980).

Below these gravels lies Petersburg granite; fine to coarse grained, uniform to porphyritic, foliated to non-foliated granite, granodiorite and minor quartz monzonite, all of Paleozoic age (Goodwin, 1980).

3.0 HYDROLOGY

3.1 Ground Water

Ground water storage and movement in the Fall Zone occurs in the Tertiary gravels, the saprolite and in the underlying Petersburg granite (Ellison, 1979). The saprolite has hydrogeologic characteristics similar to unconsolidated sediments, but its permeability is considerably lower due to its non-transported nature and high clay content (Wigglesworth, 1984). The water-bearing capacity of the Petersburg granite depends upon the frequency and interconnection of the fractures. With depth, fractures decrease in frequency and size, and it is assumed that with depth, water-bearing fractures are rarely encountered.

5.2 Surface Water

The potential for surface water contamination is small due to the small amount of waste disposed of at the site. It appears that most or all of the cleaning waste would infiltrate into the ground before running off-site.

5.3 Direct Contact

There is a potential for direct contact because the waste disposed of is not contained. The property is fenced, but the gate is not locked at night.

5.4 Food Chain

No contamination of the food chain is expected.

5.5 Air Contact

None expected due to the nature of the waste.

6.0 SUMMARY

The cleaning waste at Virginia Saw and Knife can be described as improperly contained since it is poured directly onto dirt and gravel. However, due to the nature of the waste, the small amounts that are disposed of and the infrequency of disposal, this site will be given a "No Further Action" priority.

This site was referred to the SWCB so that they may issue a permit to Virginia Saw and Knife if deemed necessary, or suggest an alternate disposal method.

REFERENCES

- Caper, Dennis, Sanitarian, Chesterfield County, Virginia, personal communication, 3/29/88.
- Census of Population, U. S. Department of Commerce: Bureau of the Census, Virginia, 1980, 48-8, 48-9.
- Climatological Data Annual Summary, National Oceanic and Atmospheric Administration, Virginia, 1984, vol. 34. no.13, pp. 2, 10.
- Ellison, R. P., III, and Masiello, R. A., 1979, Groundwater Resources of Hanover County, Virginia: Commonwealth of Virginia, State Water Control Board, Bureau of Water Control Management, Planning Bulletin 314.
- Goodwin, B. K., 1980, Geology of the Bon Air Quadrangle, Virginia: Virginia Division of Mineral Resources Publication 18, text and 1:24,000 scale map.
- Loewenthal, Barbara, Secretary at Rockwood Park Associates, personal communication, 3/11/88.
- Simmons, David, owner of Virginia Saw and Knife, personal communication, 3/8/88 and 3/9/88.
- Vier, Bill, Principle Engineering Assistant, Utilities Department, Chesterfield County, Virginia, personal communication, 3/29/88.
- Wigglesworth, H. A., Perry T. W., Ellison, R. P. III, 1984, Groundwater Resources of Henrico County, Virginia: Commonwealth of Virginia, State Water Control Board, Bureau of Surveillance and Field Studies, Planning Bulletin 328.

APPENDIX A
PHOTOGRAPHIC LOGS

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APPENDIX B
EPA PRELIMINARY ASSESSMENT FORMS



POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT PART 2 - WASTE INFORMATION

1. IDENTIFICATION

01 STATE	02 SITE NUMBER
----------	----------------

VA

U. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [illegible]

02 WASTE QUANTITY AT SITE

(Measures of waste generated must be independent)

TONS

CUBIC YARDS

NO. OF DRUMS

60 gallons

03 WASTE CHARACTERISTICS (Check all that apply)

- | | | |
|---|--|---|
| <input type="checkbox"/> A. TOXIC | <input type="checkbox"/> E. SOLUBLE | <input type="checkbox"/> I. HIGHLY VOLATILE |
| <input type="checkbox"/> B. CORROSIVE | <input type="checkbox"/> F. INFECTIOUS | <input type="checkbox"/> J. EXPLOSIVE |
| <input type="checkbox"/> C. RADIOACTIVE | <input type="checkbox"/> G. FLAMMABLE | <input type="checkbox"/> K. REACTIVE |
| <input type="checkbox"/> D. PERSISTENT | <input type="checkbox"/> H. IGNITABLE | <input type="checkbox"/> L. INCOMPATIBLE |
| | | <input type="checkbox"/> M. NOT APPLICABLE |

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS	60 gal		
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS Numbers)

[illegible]

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., book title, journal articles, reports)

Mr. David Simmons, site operator



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: VA 02 SITE NUMBER

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II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None expected.

01 ☐ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (Include name(s) of species)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None expected.

01 ☐ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None expected.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES
(Spills/runoff/standing liquids/leaking drums)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Dumping occurs directly onto the ground.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None expected.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

N/A

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

N/A

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 1,975 within three miles; 136 within 0.25 miles

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e. g., state files, sample analysis, reports)

Mr. David Simmons, site operator

FIELD TRIP SUMMARY REPORT

This summary should be prepared in conjunction with the Preliminary Assessment, EPA Form 2070-12.

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EPA Case Number _____ Site Name Virginia Saw and Knife

<p>Site Description</p> <p>Site is a small saw and knife sharpening shop and dirt parking lot. Contains approximately eight (8) sharpeners/grinders. Approximately five (5) square feet of the dirt/gravel parking lot is used as a disposal area.</p>	
<p>Area of site (acres)</p> <p>About 1300 square feet</p>	<p>Hazardous portion, if not entire site</p> <p>5 square feet</p>
<p>Description of processes/operations which took place at the site</p> <p>The shop grinds and sharpens saws and knives. Before sharpening, the blades are washed in a solution of Aquatene (used to use Oakite) and water. The solution is kept in a fifteen (15) gallon container. The saws are rinsed after washing in water and grinding fluid.</p>	
<p>Waste handling/disposal practices</p> <p>The Aquatene - water solution is changed about twice per year; the old solution is dumped out onto the ground outside the shop. The shop used to use Oakite - dumped this once or twice. The water/grinding fluid mixture is also dumped on the ground.</p>	
<p>Site topography and runoff drainage pathways</p> <p>The site is located at an elevation of 290 feet MSL. Runoff is to the east.</p>	
<p>Surface or subsurface drainage areas (leachate) noted?</p> <p>No. However, the parking lot had pools of standing water.</p>	<p>Odors/stains noted?</p> <p>in parking lot</p>
	<p>Stressed vegetation noted?</p> <p>no</p>
<p>Location and description of streams or receiving waters adjacent to site. Include flow direction and observations. Note location on attached map.</p> <p>Tributaries to Pocoshock Creek (1 3/4 miles south) are located 1/2 mile east and 3/4 miles south of the site. Flow direction is southeast. Tributaries to Powhite Creek are found about 1 1/2 miles northeast of the site.</p>	
<p>Monitoring wells on site or in vicinity. Note location on attached map.</p> <p>None.</p>	

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(Red)Population within $\frac{1}{4}$ mile of site:

- ☐ 0-10
☐ 10-100
☒ greater than 100

Population within 1 mile of site:

- ☐ 0-10
☐ 10-100
☐ 100-1000
☒ greater than 1000

Surrounding land use (woodlot, agricultural, recreation, industrial, etc.)

NORTH

residential, commercial

EAST

commercial

SOUTH

residential

WEST

commercial

Municipal water supply within 3-mile radius (note use of surface water and/or wells)

No municipal water supply source is located within three (3) miles of this site. Residents use the Swift Creek Reservoir and the Appomattox River for their water supply.

Reference: Bill Vier, Chesterfield County Utilities

Domestic wells. Approximate number within $\frac{1}{4}$ mile:

List nearest downgradient wells below and show locations on attached map.

Owner/Resident	Address	Phone

Groundwater flow direction, if known

Description of odor/taste problems

N/A

State inspection activity (including permits held)

N/A

State/Federal/Private remedial activities

None.

Additional comments—Further description of site

It appears that the diluted nature of the material and the minimal amount disposed of make the potential hazard very small. Site was referred to the State Water Control Board (SWCB).

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Name and Title	Affiliation	Phone
Mr. David Simmons	Virginia Saw and Knife	(804) 323-1055
Mr. Willis Thompson ..	Rockwood Park Associates	(804) 745-8357

INSPECTION INFORMATION

Name and title of inspector(s) Emma Pope, Doug Shafer

Agency DWM Phone number (804) 786-3017

Date March 9, 1988 Time on site 11:00 a.m. - 12:00 p.m.

Weather conditions:

Raining, 60°F

ATTACHMENTS

- o Topographic map identifying site location. Include name of quadrangle map.
- o Site sketch map showing location of monitoring wells, domestic wells, municipal water supplies, and areas of concern (lagoons, leachate seeps, drums, etc.)
- o Any available sampling results or state monitoring data with map showing sample locations.